

Chaminade M.S. Program in Counseling Psych.

Summer Term 2022

## **PSY 616: STATISTICS, RESEARCH AND EVALUATION**

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**Meeting Time:** Wed., 5:30-9:30pm

**Recommended Texts:** 1) Cozby, P. C. & Bates, S.C. (2015). *Methods in behavioral research* (12th ed.). New York: McGraw Hill.

2) Welkowitz, J., Cohen, J. and Ewen, R. B. (2007). *Introductory statistics for the behavioral sciences* (6th ed.). New York: Wiley.

### **Catalog Course Description**

This course covers the fundamentals of research design, statistical analysis, and evaluation of research results within the counseling context. Computer applications for statistical analyses are utilized.

### **Instructor's Course Description**

This course covers the fundamentals of research design, statistical analysis, and evaluation of research results within the counseling context. Computer application for statistical analysis is utilized. This course develops and assesses the skills and competencies for the MSCP program core student learning outcome of research and evaluation. In addition, it also addresses the MSCP core program student learning outcomes of 1) professional issues and ethics and 2) social and cultural foundations. *It is imperative that students keep all syllabi from all courses taken while in the MSCP program to facilitate the application process for licensing, certification, doctorate school application, etc.*

**Chaminade MSCP Description webpage:** <http://www.chaminade.edu/admissions/grad/mscp.php>

### **MSCP Core Program Learning Outcomes (PLOs)**

1. Students will identify core counseling theories, principles, concepts, techniques and facts.
2. Students will demonstrate the ability to facilitate the counseling process with clients.
3. Students will identify the relationship between adaptation and change and the counseling process.

### **Student Learning Outcomes:**

1. Students will identify basic assumptions, characteristics and methods of empirical science as they are used to support core counseling theories, principles, techniques and facts (PLO#1);
2. Students will demonstrate the ability to propose scientific research that demonstrates the efficacy of the counseling process with clients (PLO#2);
3. Students will devise an approach to demonstrating the relationship between adaptation and change and the counseling process (PLOs #2 and #3)

## **ACA Ethical guidelines for Self-Care and Self-Monitoring**

Given the 1) long-standing issue of problematic self-care and self-monitoring in the field of counseling, clinical psychology, and psychotherapy, 2) chronic stress demonstrated by many students in the current Covid-19 ever-changing, and uncertain environment, 3) fact that there appears there will be numerous stressed out clients as a result of the Covid 19 ever-changing, and uncertain environment, and 4) fact that the ACA requires self-care and self-monitoring as part of their ethical guidelines, all courses will include and address the following ACA guidelines in all of their syllabi. These guidelines also apply to all faculty and staff teaching in the MSCP program.

They are listed as follows:

- Try setting aside time to read, enjoy the outdoors, bake, journal, draw, or do a grounding activity. Use a video conferencing platform to talk with family and friends. Use a calming app to help manage any feelings you have or talk with someone who knows you and can help support you through these difficult times. Remember that it's OK to have a multitude of feelings.
- Create a routine that fits your new schedule. Having children or a spouse or significant other who is also at home can also affect your schedule. Talk with the other adult(s) in your home about their expectations of working from home and how you can create a routine that works for everyone. Be flexible as things change for your children's schooling, your work schedule, or your significant other's schedule.
- Be realistic. It's OK if you don't finish everything you had wanted to accomplish during the day. In these uncertain times, it is perfectly acceptable to not be as productive as you were in your previous work setting. Remember that you are balancing different tasks now that you need to work from home. Find the positive in what you were able to complete.
- Remember that you are not alone in this. Every day new information comes out, and it takes time to process what you've learned and figure out what it means for you. As you care for yourself, you may find a new strength within you that helps you cope with society today.

## **Relationship of Course with Marianist Educational Values**

All five of the Marianist Educational Values are represented to varying degrees in this required course, but two of them, including "Educate for adaptation to change" as well as "Provide an excellent education" are particularly relevant. In these days of assessment of learning outcomes there is little room for subjective evaluation of excellence or change. Our accreditation bodies and education shareholders demand measurable evidence of these outcomes. Whether we intend to show increased self-efficacy from nursing education, increased achievement in mathematics, or enhanced strength from weight training, all involve the basic principles of measurement and techniques for evaluating change. This course teaches the basic principles of classical measurement theory, as well as the methods of evaluating psychometric scales by demonstrating reliability and validity. Without measurement, we cannot speak definitively about excellence or change.

## **Marianist Educational Values**

*Chaminade University is a Catholic, Marianist University. The five characteristics of a Marianist education are:*

**1. Educate for Formation in Faith**

Catholic Universities affirm an intricate relationship between reason and faith. As important as discursive and logical formulations and critical thinking are, they are not able to capture all that can be and ought to be learned. Intellectual rigor coupled with respectful humility provide a more profound preparation for both career and life. Intellectual rigor characterizes the pursuit of all that can be learned. Respectful humility reminds people of faith that they need to learn from those who are of other faiths and cultures, as well as from those who may have no religious faith at all.

**2. Provide an Excellent Education**

In the Marianist approach to education, “excellence” includes the whole person, not just the technician or rhetorician. Marianist universities educate whole persons, developing their physical, psychological, intellectual, moral, spiritual and social qualities. Faculty and students attend to fundamental moral attitudes, develop their personal talents and acquire skills that will help them learn all their lives. The Marianist approach to education links theory and practice, liberal and professional education. Our age has been deeply shaped by science and technology. Most recently, information and educational technologies have changed the way faculty and students research and teach. At Marianist Universities, two goals are pursued simultaneously: an appropriate use of information technology for learning, and the enhancement of interaction between students and teachers. As Catholic, Marianist Universities seek to embrace diverse peoples and understand diverse cultures, convinced that ultimately, when such people come together, one of the highest purposes of education is realized: a human community that respects every individual within it.

**3. Educate in Family Spirit**

Known for their strong sense of community, Marianists have traditionally spoken of this sense as “family spirit.” Marianist educational experience fosters the development of a community characterized by a sense of family spirit that accepts each person with loving respect, and draws everyone in the university into the challenge of community building. Family spirit also enables Marianist universities to challenge their students, faculty and staff to excellence and maturity, because the acceptance and love of a community gives its members the courage to risk failure and the joy of sharing success.

**4. Educate for Service, Justice, and Peace**

The Marianist approach to higher education is deeply committed to the common good. The intellectual life itself is undertaken as a form of service in the interest of justice and peace, and the university curriculum is designed to connect the classroom with the wider world. In addition, Marianist universities extend a special concern for the poor and marginalized and promote the dignity, rights and responsibilities of all people.

**5. Educate for Adaptation to Change**

In the midst of rapid social and technological change, Marianist universities readily adapt and change their methods and structures so that the wisdom of their educational philosophy and spirituality may be transmitted even more fully. “New times call for new methods,” Father Chaminade often repeated. The Marianist university faces the future confidently, on the one hand knowing that it draws on a rich educational philosophy, and on the other fully aware for that philosophy to remain vibrant in changing times, adaptations need to be made. *Selected from Characteristics of Marianist Universities: A Resource Paper, Published in 1999 by Chaminade University of Honolulu, St. Mary’s University and University of Dayton* Each of these characteristics is integrated, to varying degrees, in this course.

## **Technology and Software Requirements**

For this asynchronous online course, it is assumed that the student will have reliable access to the internet through any standard web browser (e.g., Safari, Chrome, Firefox, etc.). The only additional software required is access to Microsoft Powerpoint (included in the Microsoft Office Suite package for both PC and Mac platforms) and Microsoft Word (or Google Docs) for submission of written assignments.

## **Faculty-Student Grading/Feedback Expectations**

Assuming on-time submission of assignments, the instructor will make every reasonable effort to return graded assignments within one week of submission. Communications via email will be generally responded to in the same day but no later than 2 days after receipt.

## Student Interaction Expectations

Students are expected to conduct themselves in a manner appropriate to professional standards in counseling, i.e., treat each other with respect and courtesy. Group assignments, when assigned, should be delegated to respective group members so that equivalent effort is a likely outcome. Group conveners will be responsible for ensuring that standard is met.

## Assessment

1) Quizzes--there will be 10 weekly quizzes consisting of 10 multiple choice questions with an allowable completion time of 15 minutes for each quiz (or longer when calculations are required). The ten quizzes combined will contribute a total of 100 pts possible towards the course total. Quizzes will be available for a 48-hr period from Saturday through Sunday each week (midnight to midnight).

Research Proposal. In order to demonstrate practical knowledge of research methodology, the student will prepare a research proposal addressing a specific problem of interest within your specific emphasis (school, mental health, or marriage and family counseling). The proposal will be submitted in separate sections: Title page, Abstract, Introduction, Method, References and Appendix (including blank copies of scales) with due dates as noted in the Course Calendar. The structure of the proposal is to conform to current standards as stated in the 2019 APA Guidelines (per the Publication Manual of the American Psychological Association, 2019, 7<sup>th</sup> edition). For more information go to the following website on APA style: [Owl at Purdue APA](#)

## Grading Criteria

<u>Quizzes</u> (10@10pts ea)-----	100 pts	<u>Points</u>	<u>Grade</u>
		135-150	A
<u>Res. Proposal</u> : Abstract-----	5	112-134	B
Intro. -----	15	below 112	C
Method -----	15		
<u>Final Draft</u> ---	<u>15</u>		
Total -----	150 pts		

## Grading Policy / Late Submissions

It is assumed that students will allocate their time so that all assignments and quizzes will be submitted by the deadline. Make-up quizzes will only be considered if extraordinary circumstances occur that might reasonably prevent a student from meeting the 48-hr window of time available for quiz completion (Fri-Sat each week). Assignments should be submitted by the respective deadlines with the understanding that one point (1 pt) will be deducted for each day that the assignment is late.

## Academic Honesty

Violations of academic honesty principles are extremely serious and won't be tolerated. Examples of dishonesty are records theft, cheating on examinations, altering grades, and plagiarism. Specific instances of dishonesty are investigated first by the instructor, then the program director. The penalty for dishonesty can range from an F grade to expulsion from the University.

## **Title IX**

Chaminade University of Honolulu recognizes the inherent dignity of all individuals and promotes respect for all people. Sexual misconduct will NOT be tolerated at Chaminade. If you have been the victim of sexual misconduct, we encourage you to report this matter promptly. As a faculty member, I am interested in promoting a safe and healthy environment. Should I learn of any sexual misconduct, I am required to report the matter to the Title IX Coordinator as part of my mandatory reporting responsibilities. If you wish to speak to a **confidential** source, you may contact the Personal Counseling Center on the Chaminade campus. Phone | [808.735.4845](tel:808.735.4845) |

## **Students with Disabilities**

Chaminade will provide assistance for any student with documented disabilities. Any student who believes he/she may need accommodations in this class must contact the ADA Accommodations Office (email: [ada@chaminade.edu](mailto:ada@chaminade.edu); phone: 808-739-8305) in order to determine whether the student meets the requirements for documented disability in accordance with the Americans with Disabilities Act. It is important to contact them as soon as possible so that accommodations are implemented in a timely fashion.

## **Scientific Method Definitions**

The **METHODS OF SCIENCE** are only tools, tools that we use to obtain knowledge about phenomena.

The **SCIENTIFIC METHOD** is a set of assumptions and rules about collecting and evaluating data. The explicitly stated assumptions and rules enable a standard, systematic method of investigation that is designed to reduce bias as much as possible. Central to the scientific method is the collection of data, which allows investigators to put their ideas to an empirical test, outside of or apart from their personal biases. In essence, stripped of all its glamour, scientific inquiry is nothing more **THAN A WAY OF LIMITING FALSE CONCLUSIONS ABOUT NATURAL EVENTS**.

Knowledge of which the credibility of a profession is based must be objective and verifiable (testable) rather than subjective and untestable.

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### Scientific Method Definitions (cont.):

**SCIENCE** is a mode of controlled inquiry to develop an objective, effective, and credible way of knowing.

The assumptions one makes regarding the basic qualities of human nature (that is, cognitive, affective, behavioral, and physiological processes) affect how one conceptualizes human behavior.

The two basic functions of scientific approach are 1) advance knowledge, to make discoveries, and to learn facts in order to improve some aspect of the world, and 2) to establish relations among events, develop theories, and this helps professionals to make predictions of future events.

Research Design And Counseling

Heppner, Kivlighan, and Wampold

A **THEORY** is a large body of interconnected propositions about how some portion of the world operates; a **HYPOTHESIS** is a smaller body of propositions. **HYPOTHESES** are smaller versions of theories. Some are derived or born from theories. Others begin as researchers' hunches and develop into theories.

The **PHILOSOPHY OF SCIENCE** decrees we can only falsify, not verify (prove), theories because we can never be sure that any given theory provides the best explanation for a set of observations.

Research Method In Social Relations

Kidder

**THEORIES** are not themselves directly proved or disproved by research. Even **HYPOTHESES** cannot be proved or disproved directly. Rather, research may either support or fail to support a particular hypothesis derived from a theory.

Scientific research has four general goals: (1) to describe behavior, (2) to predict behavior, (3) to determine the causes of behavior, and (4) to understand or explain behavior.

Methods In Behavioral Research; Cozby

In order to verify the reliability and validity of scientific research it is important to replicate the results. It is the preponderance of evidence that establishes/supports the theory.

<http://allpsych.com/researchmethods/replication.html>

**Course Calendar:**

<u>Week:</u>	<u>Topic</u>	<u>Lesson</u>	<u>Quiz (Sat-Sun)</u>
July 6	Intro. to behavioral research <b>Read:</b> Chapter 1: Science of Behavior ( <b>complete “check-up Quiz”</b> ) Modern origins of our current epistemic crisis (see Announcements) <b>Watch:</b> Sacha Baron Cohen--Never is now, 1st 10 minutes <b>Sample Proposal ideas</b>		Quiz 1
	Variables and measurement	1-1	
	Understanding correlation	1-2	
13	Writing workshop (class exercise) Threats to internal validity Types of Experimental Designs <b>--Research problem due</b> (hand-in to instructor)	2-1 2-2	Quiz 2
20	Descriptive statistics: frequency distributions measures central tendency variability standard scores & normal curve <b>--Using Microsoft Excel for statistical analysis</b>	3-1 3-2 3-3 3-4	Quiz 3
27	Quasi-experimental designs Issues in survey research Sampling methods Scaling techniques (lecture) <b>--Introduction section (plus reference list) due</b>	4-1 4-2	Quiz 4
Aug 3	Hypothesis Testing <b>--Using SPSS for statistical analysis</b> Correlation		Quiz 5
10	Hypothesis testing (cont.) Bivariate Comparisons: t-tests <b>--Method section due</b>	6-2	Quiz 6
17	Linear regression	7-1	Quiz 7
24	One-factor ANOVA Non-parametric analysis: Chi-square <b>--Abstract Due</b>	8-1 8-2	Quiz 8
31	Choosing the appropriate statistical test	9-1	Quiz 9
Sept. 7	Overview <b>--Final draft research proposal due (incl. blank copies of scales as Appendix)</b>	Handout	Quiz 10

## LIST OF AVAILABLE SCALES (available under “Files” in Canvas course site)

Depending on the type of research project chosen, Methods students may have need for scaling various dependent variables (Example, a student proposing to compare self esteem levels of children from divorced vs. non-divorced families would need to scale self esteem).

- 1) Hudson Scales (Hudson, 1982) 15 - 20 min each
  - a) Child's Attitude Toward Father (CAF)—*quality of relationship with father*
  - b) Child's Attitude Toward Mother (CAM)—*quality of relationship with mother*
  - c) Generalized Contentment Scale (GCS)—*life satisfaction*
  - d) Index of Family Relations (IFR)—*quality of relationships with family members*
  - e) Index of Marital Satisfaction (IMS)—*quality of marital relationship*
  - f) Index of Parental Attitudes (IPA)—*quality of relationships with children*
  - g) Index of Peer Relations (IPR)—*quality of relationships with peers*
  - h) Index of Self-Esteem (ISE)—*level of self-regard*
  - i) Index of Sexual Satisfaction (ISS)—*quality of sexual relationship*
  - j) Sexual Attitude Scale (SAS)—*level of conservativeness regarding sex (increasing score)*

**Scoring Hudson scales:** i) At bottom of each scale is a list of numbers--these refer to the items on the scale which are to be reverse-scored--e.g., if nos. read "1, 3, 5" then score as follows:

<u>Item</u>	<u>Score</u>	<u>Reverse score</u>	
1	<del>3</del>	3	<b>Important:</b> Crossing out the regular score of reverse-scored items ensures that you do not count them as you add up the regular score column.
2	1		
3	<del>4</del>	5	
4	5		
5	<del>5</del>	1	
Totals:	6	9	

ii) SCORE = Sum of regular scores (uncrossed-out ones) + sum of reverse scores - 25 pts

iii) Clinical criterion is 30--scores higher than this may indicate a potential problem of clinical significance. (possible range: 0-100 pts)

- 2) Adverse Childhood Experience Scale (ACE) 5-10 min
- 3) Beck's Depression Inventory-II (Beck et al., 1996) 20-25 min
- 4) State-Trait Anxiety Inventory (Spielberger et al., 1976) 25-30 min
- 5) Locus of Control (LOC) (Nowicki & Strickland, 1976) 20-25 min
- 6) Social Desirability Scale (SD) (Crowne & Marlowe, 1960) 20-25 min
- 7) Job Satisfaction Index (BPC Publishing Ltd., 1975) 15-20 min
- 8) Michigan Alcoholism Screening Test (MAST) 10-15 min
- 9) Dissociative Experience Scale (DES) 10-15 min  
<http://traumadissociation.com/des>